

Appn. No. 10/731,936

Attorney Docket No. 10541-1927

I. Amendments to the Claims

1-14. (Cancelled)

15. (Currently Amended) ~~The method of claim 14~~ 16, further comprising the steps of:

providing a multi-position ignition switch linked to said starter motor;
recognizing the initial status of one or more of said vehicle systems required to start said vehicle engine; and
detecting whether said multi-position ignition switch is in a pre-determined position.

16. (Currently Amended) ~~The method of claim 14~~, further comprising the steps of:

A method for starting a vehicle, said vehicle comprising a vehicle engine, a starter motor linked to said vehicle engine through an engine clutch, and a plurality of vehicle systems linked to said starter motor, said method comprising the steps of:

starting said starter motor;
checking the status of one or more of said vehicle systems to determine whether said vehicle engine should be started;
applying a torque to said vehicle engine by connecting said vehicle engine with said starter motor through said engine clutch; and
confirming whether said vehicle engine has successfully started;
providing a multi-position ignition switch linked to said starter motor;
recognizing the initial status of one or more of said vehicle systems required to start said vehicle engine;
detecting whether said multi-position ignition switch is not positioned in a pre-determined position for a set length of time; and
shutting down the starter motor.



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17. (Currently Amended) The method of claim 14 16, wherein said vehicle further comprises a set of gears linked to said starter motor through a transmission clutch, said initial status of one or more of said vehicle systems required to start said vehicle engine comprising at least one member of the following group:

- the engagement of said set of gears;
- the engagement of said transmission clutch;
- the engagement of said engine clutch; and
- the operation of said vehicle.

18. (Currently Amended) The method of claim 14 16, wherein said step of checking the status of one or more engine systems further comprises the steps of:

- evaluating the amount of time said vehicle engine has idled without a start attempt; and
- detecting whether said multi-position ignition switch is in a pre-determined position.

19. (Original) The method of claim 18, further comprising the step of shutting down said starter motor if the amount of time said vehicle engine has idled reaches a predetermined length.

20. (Currently Amended) The method of claim 14 16 hereinafter comprising the step of confirming whether said vehicle engine has successfully started further comprises the steps of:

- evaluating whether the current angular velocity of said vehicle engine is greater than that of the vehicle engine while idle;
- evaluating the time said vehicle engine has been cranking without starting, if said vehicle engine's speed is less than idle speed; and



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shutting down said starter motor if said time of cranking is greater than a pre-determined length of time.

21. (New) A method for starting a vehicle, said vehicle comprising a vehicle engine, a starter motor linked to said vehicle engine through an engine clutch, and a plurality of vehicle systems linked to said starter motor, said method comprising the steps of:

starting said starter motor;

checking the status of one or more of said vehicle systems to determine whether said vehicle engine should be started;

applying a torque to said vehicle engine by connecting said vehicle engine with said starter motor through said engine clutch;

confirming whether said vehicle engine has successfully started;

evaluating the amount of time said vehicle engine has idled without a start attempt;

detecting whether said multi-position ignition switch is in a pre-determined position; and

shutting down said starter motor if the amount of time said vehicle engine has idled reaches a predetermined length.

22. (New) A method for starting a vehicle, said vehicle comprising a vehicle engine, a starter motor linked to said vehicle engine through an engine clutch, and a plurality of vehicle systems linked to said starter motor, said method comprising the steps of:

starting said starter motor;

checking the status of one or more of said vehicle systems to determine whether said vehicle engine should be started;

applying a torque to said vehicle engine by connecting said vehicle engine with said starter motor through said engine clutch;

confirming whether said vehicle engine has successfully started;



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evaluating whether the current angular velocity of said vehicle engine is greater than that of the vehicle engine while idle;

evaluating the time said vehicle engine has been cranking without starting, if said vehicle engine's speed is less than idle speed; and

shutting down said starter motor if said time of cranking is greater than a pre-determined length of time.



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